CBCS SCHEME

18CS35

Third Semester B.E. Degree Examination, Dec.2023/Jan.2024
Software Engineering

Time: 3 hrs.   Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1	a.	List and explain Software Engineering codes of Ethics.	(06 Marks)
	b.	With neat diagram explain water-fall model of software development process.	(08 Marks)
	c.	With the help of diagram explain about insulin pump control system.	(06 Marks)

OR

2	a.	Explain functional and non-functional requirements with one example for each.	(06 Marks)
	b.	Explain Boehm's spiral model with neat diagram.	(08 Marks)
	c.	Why the understanding requirements from stakeholders is a difficult task? Explain.	(06 Marks)

Module-2

3	a.	Explain the three system models.	(09 Marks)
	b.	Define abstraction and encapsulation.	(06 Marks)
	c.	How data and behavior can be combined in OO approach?	(05 Marks)

OR

4	a.	Define Multiplicity and differentiate cardinality and multiplicity.	(06 Marks)
	b.	What is object oriented development? What are the advantages and disadvantages of object oriented development? Explain the stages of OO methodology.	(10 Marks)
	c.	Explain the terms: Identify, classification inheritance, polymorphism.	(04 Marks)

Module-3

5	a.	What is design pattern? Explain four elements of design pattern.	(06 Marks)
	b.	Draw the context model for patient management system. How the interactions are modelled?	(08 Marks)
	c.	What is behavioural model? Explain with suitable example.	(06 Marks)

OR

6	a.	Explain the phases of Rational Unified Process (RUP) with neat diagram.	(06 Marks)
	b.	What is model driven engineering? Explain three types of abstract system models produced.	(09 Marks)
	c.	List and explain all the activities in an object oriented design process.	(05 Marks)

Module-4

7	a.	Define program evolution dynamics. Explain Lehman's laws for program evolution dynamics.	(10 Marks)
	b.	What is development testing? Explain three levels of granularity carried out in testing.	(05 Marks)
	c.	What is user testing? Explain the different stages of acceptance testing process.	(05 Marks)

OR

8 a. What is test driven development? What are the benefits of test driven development?
(06 Marks)

   b. Explain the four strategic options of legacy system management. (06 Marks)
   c. Explain about unit testing and component testing with suitable example. (08 Marks)

Module-5

9 a. Explain COCOMO-II estimation model. (08 Marks)
   b. List and explain the factors affecting software pricing. (06 Marks)
   c. Describe plan driven development. (06 Marks)

OR

10 a. What are product metrics? Explain two classes of metrics. (06 Marks)
    b. Explain reviews and inspections. (06 Marks)
    c. What are configuration management? Explain four activities of configuration management.
(08 Marks)

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